

May 29, 1934.

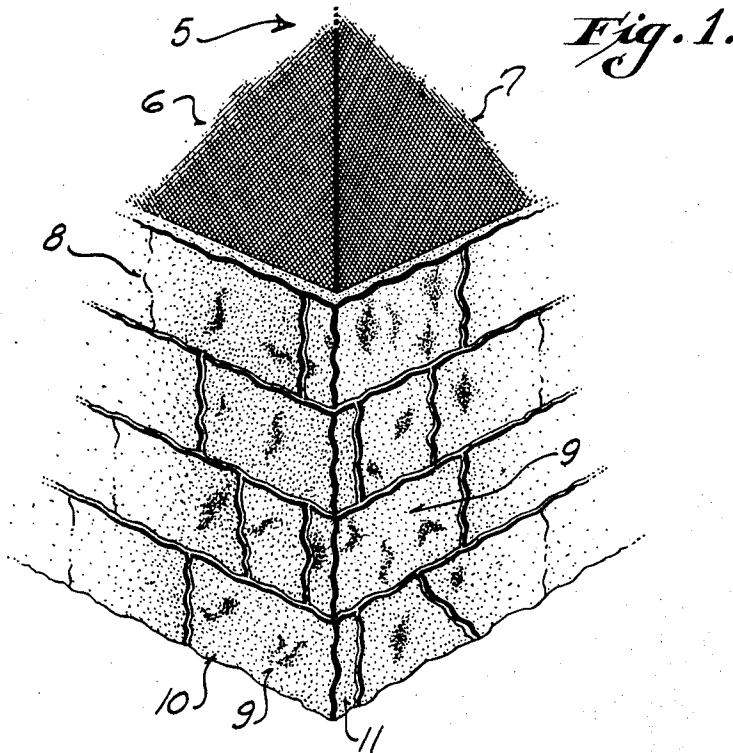
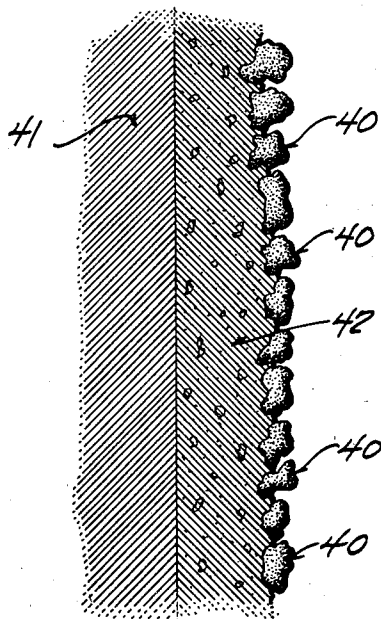
E. J. MILLER

1,960,276

APPARATUS FOR APPLYING WALL FINISHES

Filed Aug. 22, 1932

3 Sheets-Sheet 1



Inventor
Edward J. Miller
By *Smith*
Attorney

May 29, 1934.

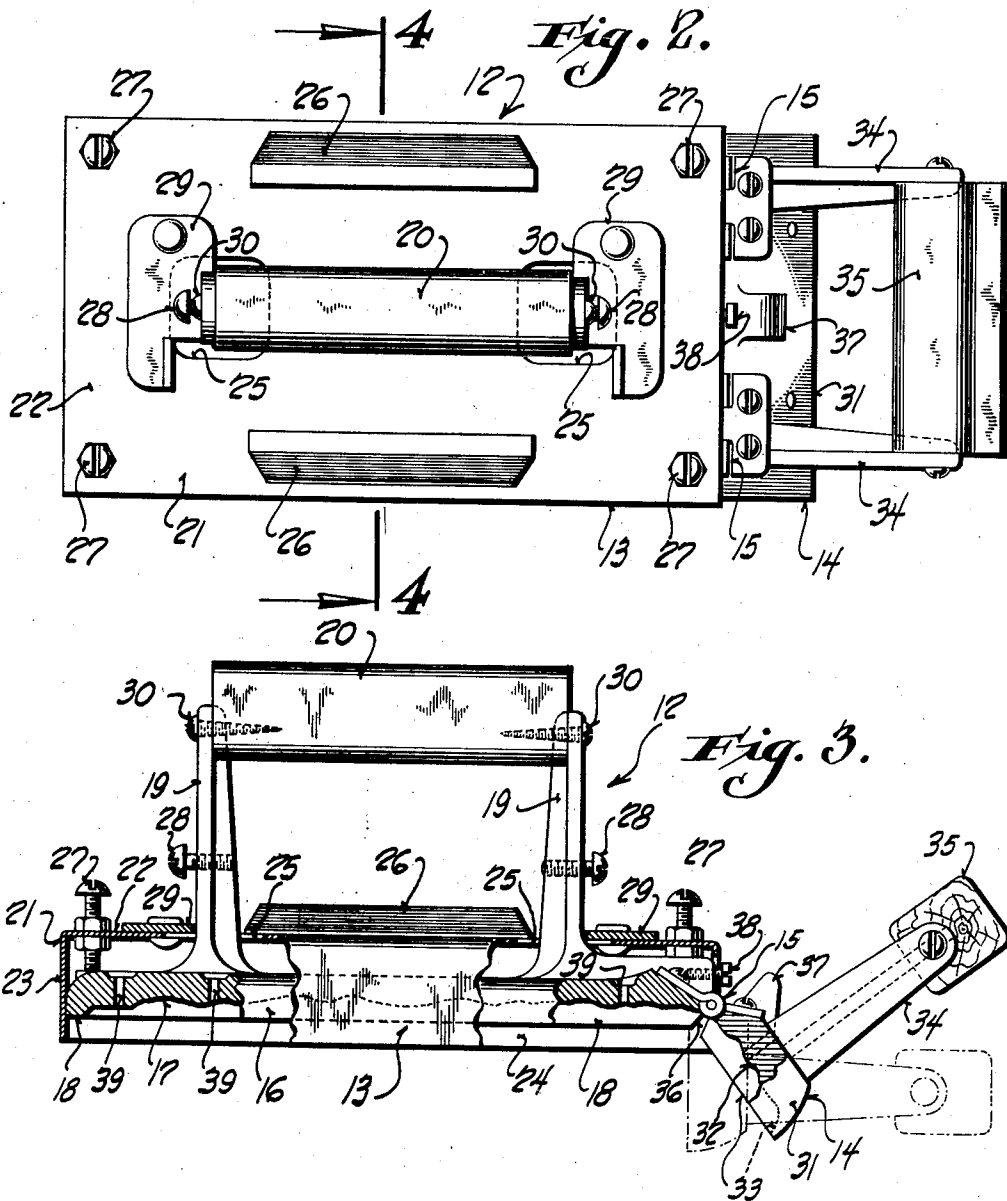
E. J. MILLER

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APPARATUS FOR APPLYING WALL FINISHES

Filed Aug. 22, 1932

3 Sheets-Sheet 2



Inventor
Edward J. Miller
By *Isabella Jones*
Attorney

May 29, 1934.

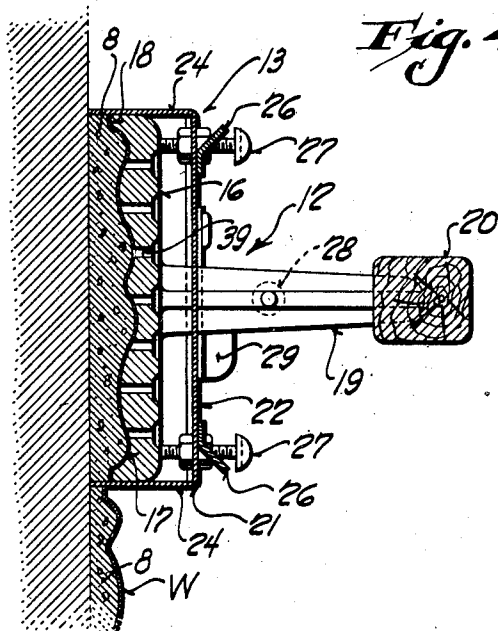
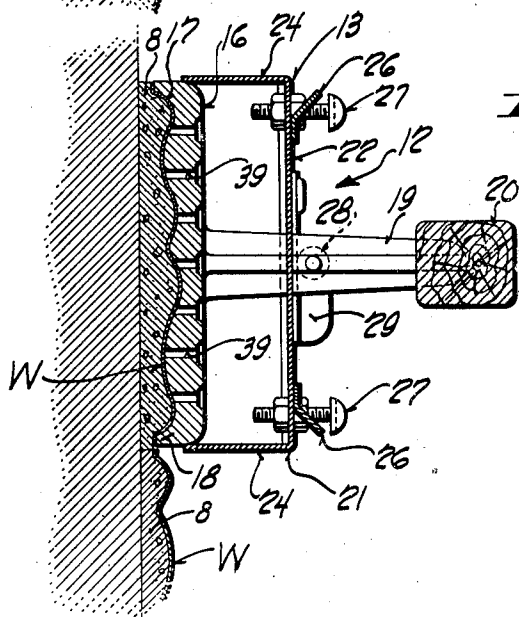
E. J. MILLER

1,960,276

APPARATUS FOR APPLYING WALL FINISHES

Filed Aug. 22, 1932

3 Sheets-Sheet 3.



Inventor

Edward J. Miller

By *Lee Hutton Jones*
Attorney

UNITED STATES PATENT OFFICE

1,960,276

APPARATUS FOR APPLYING WALL FINISHES

Edward J. Miller, Minneapolis, Minn.

Application August 22, 1932, Serial No. 629,947

5 Claims. (Cl. 25—1)

This invention relates to certain new and useful improvements in wall finishes and refers more particularly to a method of applying a plastic material to resemble various types of stone and other similar surfaces.

A co-pending application of Edward J. Miller, Serial No. 406,025, shows and describes a tool designed for the application of plastic material in such a manner that the outer surface of the applied material resembles cut stone or the like, but the tool shown in this co-pending application is capable of use only on flat surfaces.

It is, therefore, an object of this invention to provide a tool particularly adapted for applying plastic material as in the aforementioned application, to the corners of buildings or the like so as to give the appearance of stones having substantial thickness.

Another object of this invention resides in the provision of a novel method of applying acoustical surface finishes.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated two complete examples of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a fragmentary perspective view showing the corner of a building, partially covered with plastic material according to the method of this invention;

Figure 2 is a top view of a tool constructed in accordance with this invention;

Figure 3 is a view partly in side elevation and partly in section of the tool shown in Fig. 2;

Figures 4 and 5 are cross sectional views through the tool, illustrating different steps in the method of applying the plastic material; and

Figure 6 is an enlarged cross sectional view illustrating the formation of an acoustical surface made possible by this invention.

Referring now more particularly to the accompanying drawings in which like numerals indicate like parts throughout the several views, the numeral 5 represents the corner of a building or the like, formed by two meeting walls 6

and 7, which are to be covered with plastic material in accordance with this invention. If the walls 6 and 7 are of wood or similar material, they are preferably first covered with metal lath, or some other similar retaining medium, but if of stone, plaster, or stucco, they may be left in their natural state and the plastic material of this invention applied directly thereto.

In the aforementioned co-pending application of Edward J. Miller, the application of the plastic material to the surface being covered was effected by means of a conveniently handled tool whereby individual quantities of plastic material were pressed onto the supporting surface. This tool, as hereinbefore noted, was limited in its use to flat surfaces, whereas the present invention contemplates the provision of a tool whereby corners such as illustrated in Fig. 1 and similar angularly disposed surfaces may be coated so as to give the finished structure the appearance of being formed of stones having substantial thickness.

The desired surface appearance is depicted in Fig. 1, wherein the flat portions of the walls 6 and 7 may be covered with plastic material 8, applied in accordance with the method and by means of the tool defined in the aforementioned co-pending application. The extreme corner, however, to give the desired appearance, is covered by sections 9 of plastic material which have a large area 10 covering one wall and a smaller area 11 lapping around the corner to cover the other wall. In this manner, an appearance of stones of substantial thickness is produced. These corner sections 9 of the plastic covering are produced by means of a novel tool indicated generally by the numeral 12 and illustrated in detail in Figs. 2 and 3.

This tool consists of two sections 13 and 14 hingedly connected as at 15. The section 13 is of a size corresponding to the larger area 10 shown in Fig. 1, and the section 14 corresponds to and forms the area 11.

The larger section 13 comprises a plunger 16 having its outer surface 17 formed to impart to the plastic material the desired configuration and finish. At its opposite sides and at one end, the plunger 16 is provided with a peripheral rim 18 which serves to form the mortar line between the adjacent stones in the finished surface. The end of the plunger not provided with a rim 18 mounts the hinges 15, which serve to connect the two sections.

Extending from the face of the plunger opposite its forming surface 17 are two spaced standards 19 to mount a handle 20 by which the section 13 may be conveniently handled.

The plunger 16 is disposed within a flat casing or shell 21 shaped to conform to the shape of the plunger and having a flat top wall 22, an end wall 23 and side walls 24. The end of the casing 5 or shell opposite the wall 23 is left open to accommodate the hinged connected section 14, to be later described. Openings 25 in the top wall 22 of the shell or casing permit the extension of the handle standards therethrough.

10 The side and end walls of the shell are of greater height than the thickness of the plunger 16 so that the plunger is movable flatwise within the shell or casing, which relative movement is facilitated by two angularly disposed flanges 26 carried by the top wall of the shell at opposite sides 15 of the handle 20. These flanges provide grips by which the shell may be conveniently grasped.

The degree of relative flatwise movement of the plunger in the shell is defined in one direction 20 by the engagement of four adjustable stop screws 27 adjustably mounted in the four corners of the shell and having their ends engageable with the adjacent face of the plunger 16, and, in the opposite direction by the engagement of screws 28 25 secured in the standards 19, with latch members 29 pivotally mounted on the top wall 22 of the shell to partially close the openings 25.

It is to be observed that complete disassembly of the plunger and shell is readily possible by 30 merely withdrawing the screws 30 which hold the handle 20 to the standards 19 and swinging the latches 29 to uncover the openings 25 to permit the screws 28 to pass therethrough.

The smaller unit 14 consists of a single cast 35 body portion 31 having one surface 32 formed similar to the surface 17 of the plunger 16 to impart the desired configuration and finish to the plastic material, and likewise provided with a peripheral rim 33 to form the mortar lines in the 40 finished surface. Standards 34 are formed integral with the body 31 and their outer ends mount a handle 35.

The meeting edges of the plunger 16 and the body 31 of the small section 14 are cut at an angle 45 as at 36 so that when these marginal edge portions meet, a right angle will be formed by the plunger 16 and the body 31, as indicated in dotted lines in Fig. 3.

Obviously, if the tool is to be used for corners 50 at which the angle is less than ninety degrees, the marginal edges 36 of the plunger 16 and body 31 will be cut away at a corresponding angle.

A lug 37 is also cast integral with the body 31 to project outwardly therefrom and engage an 55 adjustable stop 38 preferably in the form of a screw threaded into the adjacent portion of the plunger 16, to maintain the section 14 in line with the section 13 during the filling of the tool with plastic material or when it is desired to use 60 the tool for flat surfaced work.

To use the tool, the handle 20 is grasped in one hand and held with the plunger uppermost. Holding the tool in this manner causes the section 14 to swing by gravity to a position forming 65 substantially a flat continuation of the plunger 16. With the fingers of the hand grasping the handle 20, the outer shell of casing 21 is then raised so that the plunger assumes its innermost position within the casing defined by the stop screws 27 and at which the outer edges of 70 the side walls 24 and end wall 23 of the casing form continuations of the rim 18 to define a shallow space.

The bottom of this shallow space, which is 75 formed by the surface 17 of the plunger 16 and

the surface 32 of the smaller section 14, is then covered with waxed paper or some other suitable flexible material to prevent the adhesion of plastic material to the surfaces 17 and 32, and then the shallow space is completely filled with the 80 plastic material to be applied.

The large section 13 of the tool is then applied to one wall of the corner with the hinged connection between the two sections extending 85 beyond the extreme corner. In its initial position of application, the edges of the side and end walls of the casing or shell engage directly against the surface being covered as shown in Fig. 4. Pressure is then exerted upon the handle 20 to force the plunger 16 toward the wall surface and compress the plastic material there- 90 against.

After this operation, the smaller unit 14 is swung around the corner by means of its handle 35 to press the plastic material carried thereby 95 against the other wall surface. With the tool properly positioned, a continuous thickness of compressed plastic material will thus be applied to the two walls forming the corner.

To remove the tool without disturbing the 100 formed surface, the smaller section 35 is first swung back, while maintaining the larger section in position, and then with the plunger 16 held against the formed surface as shown in Fig. 5, the casing or shell will be withdrawn by means 105 of the finger grips 26 until the shell is entirely free of the formed surface. After this the plunger 16 may be disengaged from the formed surface without difficulty.

Bleed openings 39 are formed in the plunger 110 16 and in the body 31 to preclude air suction from retarding the withdrawal of the tool.

The waxed paper "W" may be left on the formed surface to insure a more thorough and slow dehydration which results in a harder and 115 more desirable texture.

With one corner section 9 formed as described, the next adjacent section is preferably applied with its smaller area 11 covering the wall on which the large area 10 of the formed section is 120 applied so as to give the appearance of dovetailed stones.

The method of applying a wall finish or covering defined herein is also particularly adaptable to the formation of acoustical wall surfaces in 125 which the extreme outer face is composed of granulated cork or other suitable substance having good acoustical qualities. A surface of this nature is illustrated in Fig. 6.

As there shown, a layer of granulated cork 40 130 is bonded to any suitable supporting surface 41 by means of a plastic material 42 having some degree of acoustical properties.

To apply a finish or covering of this nature, the tool of this invention is first covered with waxed 135 paper, as hereinbefore described, and then a layer of ground cork approximately the size of a pea, mica, pumice stone, asbestos fiber, or any other material having the desired sound-absorbing qualities is placed over the waxed paper. 140

The tool is then filled with a suitable plastic material preferably a plastic having some acoustical properties, and the entire mass is applied, as described hereinbefore.

The formation of acoustical surfaces in this 145 manner has an advantage over the past methods of trowelling the dry material onto a plaster, as the air cells between the particles of the acoustical covering material are not destroyed or filled up as in the trowelling process. 150

In other words, the application of the acoustical surface covering in the manner defined, results in sharply defined protrusions and depressions which are of vital importance to the efficiency of the acoustical surface.

Obviously, after the entire wall surface is completed, it may be readily stained or colored in any suitable manner.

From the foregoing description taken in connection with the accompanying drawings, it will be readily apparent to those skilled in the art that this invention affords a novel wall finish and a tool for applying the same which is particularly adaptable for use on corners to increase the resemblance to cut stone or other similar surfaces by giving the appearance of substantial thickness to the individual sections.

What I claim as my invention is:

1. A tool for applying plastic material to a corner formed by the juncture of two meeting walls to give the appearance of a block having substantial thickness, comprising a pair of hingedly connected sections, each of said sections having a surface formed to impart the desired configuration and finish to the plastic material and said sections being movable from a position at which their said surfaces form substantially continuations of each other to a position at which said surfaces are angularly disposed to conform to the angular disposition of the meeting walls forming the corner, means at the edges of said surfaces of both sections to retain a quantity of plastic material applied thereto when said surfaces are substantially in line, and a handle for each section.

2. A tool to apply plastic material to a corner formed by the juncture of two meeting walls so as to give the appearance of a solid stone having substantial thickness comprising, a section having a hollowed surface adapted to contain a quantity of plastic material to be applied to one wall by the application of pressure on said section, and a second section hingedly connected to the first section and likewise having a hollowed surface adapted to hold a quantity of plastic material to be applied to the other wall upon swinging said second section around the corner and applying pressure thereto.

3. A tool for applying plastic material to a

corner formed by the juncture of two meeting walls, comprising a casing having an open front and adapted to hold a quantity of plastic material, a plunger movable within the casing to press the plastic material onto one wall, and a member hingedly connected to the plunger for movement from a position substantially in line with the plunger to a position angularly disposed thereto, said member being adapted to hold a quantity of plastic material to be forced onto the other wall upon swinging movement thereof around the corner.

4. A tool for applying plastic material to a corner formed by the juncture of two meeting walls to give an appearance of a block of stone or the like having substantial thickness, comprising a relatively large section shaped to resemble the side of the block of stone or the like and having a surface formed to impart the desired surface configuration to the plastic material, a movable shell connected with said section to form a container to hold a quantity of plastic material, means to impart movement of said section within the shell to press the plastic material onto one wall, a second relatively small section hingedly connected to one end of the large section, means at the peripheral edge of said small section to cooperate with said shell when the sections are in a position substantially aligned to hold plastic material, and means to swing said second section around the corner to press the plastic material carried thereby onto said other wall, the surface of said second section being formed to impart the desired surface configuration to the plastic material applied thereby.

5. A tool for applying plastic material to a corner formed by two meeting walls, comprising a pair of hingedly connected applicators, each having a surface to receive plastic material and formed to impart the desired finish to the applied plastic material, means to hold a quantity of plastic material on each of said surfaces prior to its application to the corner, and a handle on each of said applicators to facilitate the application of pressure thereto and the swinging of one applicator on its hinged connection with the other about the corner.

EDWARD J. MILLER.

Disclaimer

1,960,276.—*Edward J. Miller*, Minneapolis, Minn. APPARATUS FOR APPLYING WALL FINISHES. Patent dated May 29, 1934. Disclaimer filed Mar. 16, 1950, by the inventor.

Hereby disclaims claims 1, 2, and 5 of said patent.
[*Official Gazette April 11, 1950.*]